

Abstract of the Disclosure

An isotropic vector field decomposition method for use in scientific computations with the steps of: a computational grid modeled on a specific arrangement of nodes, such that each node is equidistant from its twelve nearest neighbors, a vector field decomposition technique utilizing six vector components at every node within the associated isotropic vector matrix, and techniques for implementing standard vector calculus operations within the isotropic vector matrix. A preferred embodiment includes wherein said techniques can be used to create an algorithm to solve computational electromagnetic problems, or any physical problem involving the use of vector fields.